

REMARKS

The Office Action dated May 20, 2008, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Status of the Claims

Claims 1, 5 and 14 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added. Claims 1, 3, 5, 6 and 14 are currently pending in the application and are respectfully submitted for consideration.

Claim Objections

On page 2, the Office Action objected to claims 1 and 5 for informalities. Specifically, the Office Action stated that "in claim 1, line 14, 'main body casing' should be --main casing--; in claim 5, line 5, 'an' should be --a--." Applicant kindly thanks the Examiner for these suggestions. The claims have been amended to incorporate these minor amendments.

Accordingly, it is respectfully submitted that the objections are overcome and respectfully requested that the objections be withdrawn.

Rejection under 35 U.S.C. § 103

Claims 1, 3, 5, 6 and 14 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tanaka (U.S. Patent No. 6,699,152) in view of Katada et al. (JP 62233540). The Office Action took the position on pages 3-5 that the combination of

Tanaka and Katada et al. teaches all of the features of the rejected claims. Applicant respectfully submits that Tanaka and Katada et al., both individually and in combination, fail to teach or suggest all of the features of the above-rejected claims. Reconsideration of the claims is respectfully requested.

Independent claim 1, from which claims 3, 5, 6 and 14 depend, recites an oscillating inner gearing planetary gear system including an internal gear, an external gear that meshes with the internal gear and an eccentric body that oscillatingly rotates either the internal gear or the external gear. The system also includes an input shaft, an output member and a middle shaft having an orthogonal gear. The orthogonal gear links the middle shaft to the input shaft at a right angle. The system further includes a main casing that houses the oscillating inner gearing planetary gear system. Either the internal gear or external gear is oscillatingly rotated via the input shaft, the orthogonal gear, the middle shaft and the eccentric body. The main casing houses the internal gear and the external gear inside the main casing such that the orthogonal gear links the middle shaft to the input shaft at the right angle inside the main casing. The main casing houses the internal gear and the external gear inside the main casing such that the orthogonal gear links the middle shaft to the input shaft at the right angle in the same single space including the internal gear and the external gear inside the main casing. The main casing is a single casing.

As will be discussed below, Tanaka and Katada et al., both individually and in combination, fail to teach or suggest all of the features of the presently pending claims.

Tanaka et al. generally discusses “a reduction gear in which hollow space is formed in a portion of its rotation center”, where the reduction gear is “provided with a motor mounting portion” (see column 1, lines 5-8).

A motor mounting member 24 is fixed to the internal gear 21 by means of bolts (not shown). The motor mounting member 24 has a central hole 24a provided at a portion of the rotation center of the reduction gear 10 as well as an input-gear supporting hole 24b provided at a position spaced apart from the portion of the rotation center so as to support an input gear member 25. The input gear member 25 is fitted to a bearing housing 25a by press fitting. The input gear member 25 which is integral with the bearing housing 25a is rotatably supported in the input-gear member 25 by means of a bearing 26. An oil seal 27 for sealing in a lubricating oil inside the reduction gear 10 is provided in the input-gear supporting hole 24b on the outer side of the bearing 26. An input gear 25b is formed at one end of the input gear member 25 and is inserted into the reduction gear on the inner side of the bearing 26, and splines 25c are formed at the other end thereof and project to the outside from the reduction gear. The bearing housing 25a may not be particularly provided.

(Column 2, line 66, through column 3, line 15, of Tanaka).

Katada et al. discusses:

[A] planetary reduction gear wherein the inner-toothed gear is composed of an arcuate gear or the like comprising a pin or a pin and roller combination and the outer-toothed gear is composed of a trochoidal or the like comprising a parallel epitrochoid curve, and also, an inner pin or an inner pin and an inner roller fit loosely with the outer-toothed gear, and mesh internally with the inner and outer-toothed gears and swings and rotates an outer-toothed gear by means of the eccentric body mated with the outer-toothed gear to reduce and output an input rotation, and more specifically, to a device whose structure which supports the output shaft of said planetary reduction gear is simplified.

(Page 3, third paragraph, of the English translation portion of Katada et al.).

Independent claim 1, as amended herein, recites, in part, that “the main casing houses the internal gear and the external gear inside the main casing such that the orthogonal gear links the middle shaft to the input shaft at the right angle in the same single space including the internal gear and the external gear inside the main casing, and the main casing is a single casing.” Applicant respectfully submits that the cited art fails to teach or suggest these features.

The Office Action stated on page 3 that a “main casing” was “made of the flange portions of gear 21 and motor mounting member 24 [and] houses the oscillating inner gearing planetary gear system”.

However, even if the internal gear were part of a main casing, the internal gear would clearly not be inside a main casing, as claimed, since the internal gear would in fact be a **part** of said main casing. It would be illogical for a casing to be considered to house itself. As such, Tanaka is incapable of teaching a main casing that houses an internal gear, as claimed.

The Office Action conceded on page 4 that “Tanaka does not disclose that the linking gear 30a of the middle shaft 30 is an orthogonal gear that links the middle shaft to the input shaft at a right angle.” Rather, the Office Action relied on Katada et al. to cure these deficiencies of Tanaka. Specifically, the Office Action alleged that “[i]t would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Tanaka to supply the middle shaft with an orthogonal gear linking the middle shaft to the input shaft at a right angle in view of Katada et al. because the size,

weight, and arrangement of the structure is compact, improving mounting performance and making it suitable for uses such as joint sections of robots (Katada et al. translation, pages 10-11).” However, Applicant submits that Katada et al. does not teach or suggest a main casing that houses the internal gear and the external gear therein and per the above, Tanaka also fails to teach or suggest such a casing. Thus, the combination of Tanaka and Katada et al. is incapable of teaching the features recited in claim 1.

Claims 3, 5, 6 and 14 depend from independent claim 1 and add further features thereto. Thus, the arguments above with respect to independent claim 1 also apply to the dependent claims.

Per the above, Tanaka and Katada et al., both individually and in combination, fail to teach or suggest all of the features of the above-rejected claims under 35 U.S.C. § 103(a). Accordingly, it is respectfully submitted that the rejection is overcome and respectfully requested that the rejection be withdrawn.

Conclusion

For at least the reasons presented above, it is respectfully submitted that claims 1, 3, 5, 6 and 14, comprising all of the currently pending claims, patentably distinguish over the cited art. Accordingly, it is respectfully requested that the claims be allowed and the application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, Applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Request for Continued Examination
Petition for Extension of Time (3 months)
Information Disclosure Statement/PTO-1449